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For the Patent- and Registration Office

Marita Öun

Marita Öun

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BERGENSTRAHLE & LINDVALL
BERGENSTRAHLE 1

NR. 397 S. 3

Ink. t. Patent- och reg. ve

2003-03-27

Huvudfoxen Kossa

CLAIMS

1. A method of providing content to a consumer terminal subscribing to a network operator, comprising the steps of:
 - receiving a purchase request from the consumer terminal in a content provider server,
 - sending a purchase approval request from the content provider server to a transaction router (IPX) in response to the received purchase request,
 - sending a purchase approval message from the transaction router to the content provider server if the network operator approves the purchase, and
 - executing the requested purchase based on the results of the previous steps.
2. A method according to claim 1, wherein the requested purchase is executed in response to receiving the purchase approval message.
3. A method according to claim 1 or 2, wherein a status report for the purchase is sent to the content provider server from the transaction router, before executing the requested purchase.
4. A method according to claim 3, wherein the status report is sent upon request from the content provider server.
5. A method according to any of claims 1 - 4, wherein a bill for the purchase is sent from the transaction router to the network operator.

6. A method according to any of claims 1 - 5, wherein the requested purchase is executed only if a confirmation message is received from the consumer terminal.

Ink. t. Patent- och re

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7. A telecommunication system, comprising:

- an access network controlled by a network operator,
- a consumer terminal subscribing to the network operator,
- a content provider server adapted to receive a purchase request from the consumer terminal,
- a transaction router (IPX) adapted to receive a purchase approval request from the content provider server for the requested purchase, and to send a purchase approval message to the content provider server if the network operator approves the purchase.

Huvudfaxen Kc

8. A telecommunication system according to claim 7, wherein the transaction router is further adapted to send a status report for the purchase to the content provider server, before the requested purchase is executed.

9. A telecommunication system according to claim 7 or 8, wherein the transaction router is further adapted to send a bill for the purchase to the network operator.

10. A transaction router (IPX) adapted to receive from a content provider server, a purchase approval request for a purchase requested by a consumer terminal subscribing to a network operator, and further adapted to send a purchase approval message to the content provider server if the network operator approves the purchase.

10. A transaction router according to claim 9, further adapted to send a status report for the purchase to the content provider server, before the requested purchase is executed.

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BERGENSTRAHLE & LINDVALL
BERGENSTRAHLE 3

NR. 397 S. 5

11. A transaction router according to claim 9 or 10, further adapted to send a bill for the purchase to the network operator.

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Huvudfoxen Kassa

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Niklas Johansson HF/INN/IPX		Doc.nr	
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Kjell Arvidsson HF/INN/IPX		2003-03-25	File

Title of invention: Internet Payment eXchange purchase procedures**1. Inventor(s)**

Niklas Johansson/Östen Forshed/Patrik Boström

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2003-03-27

Huvudföretag: Kaiser

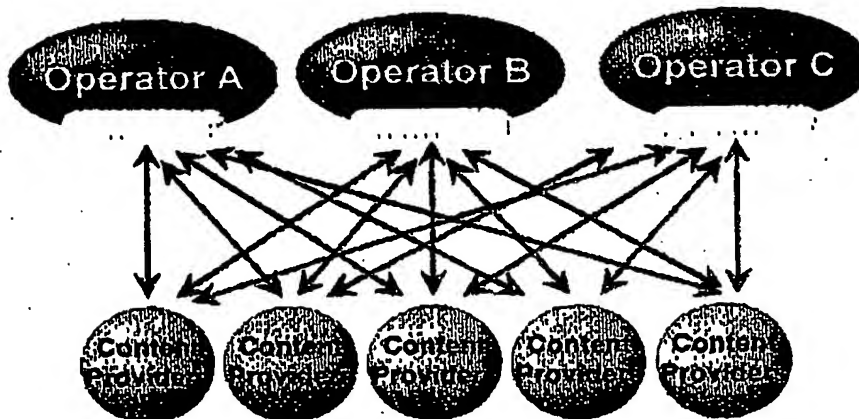
2. Deadlines

2003-03-28

3. Background, current technique

The market for sales and distribution of digital content on fixed and Mobil Internet is not developing well due to a number of constraints in existing business models and technical solutions.

Today's business model for Mobile Internet is technically complex and expensive for Operators as well as Content Providers.



The picture above illustrates today's complexity in the market with many to-peer relationships. Furthermore, there is also a lack of standard technical interfaces and as a consequence Content Providers have to interface numerous technical solutions if they desire to charge their Consumers in mobile channel. For both parties the result is time consuming and expensive. As a consequence the business incentives for Operators and Content Providers is limited and the market growth slow.

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NR. 397

S. 1

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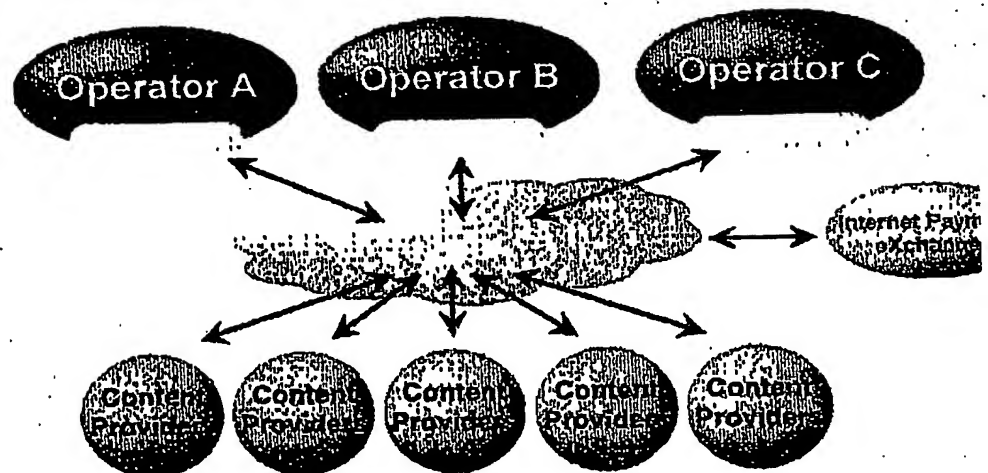
There are a number of solutions on the market today, however most of them are based on a "e-wallet" solution and requires a registration by the end-user to a new company. As an alternative credit cards can be used, however they are not suitable for micropayments.

4. Problem

The problem today with existing solutions is that most end-user doesn't perform the purchase because the threshold to register or use the credit is too high.

5. Solution

IPX introduces a complementary business model to cater for an efficient Mobile Internet market.



In the IPX business model as the above picture illustrates, Consumers will be able to purchase Open Content & Services not available in the Operators' portals. In this new scenario the Operators will generate revenues from increased traffic and billing commissions, doing billing on behalf. Additionally, the model will liberate Operators from the burden of marketing associated with Open Content.

Content Providers will be able to charge their Consumers independent of Operator belonging and market their Open Content directly to the Consumers.

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IPX is the way to solve the problem of each Operator being forced to have individual commercial relationships with all Content Providers, and vice-versa. IPX will act as a Transaction Router and Payment Mediator, and as soon as there is a purchase request from a Consumer in the session with a Content Provider, it will be rerouted to IPX. IPX will then identify the Operator belonging and request the Operator's approval for the purchase request. The answer will be sent back to the Content Provider, and if approved, transaction will take place. The Content Provider interface is uniform for all Operators and payments are managed by IPX.

Operators will collect payments done via IPX from the Consumers' through their regular billing and charging relationship, doing billing on behalf. After Operators' deduction of commission the balance of money is forwarded to IPX for payment mediation and further distribution to Content Providers. The flow of the purchase can be divided into four main phases: *Content Provider Identification/Authorization, Content Delivery and Payment.*

The Content Provider handles the direct communication to the consumer, such as marketing, providing, presenting and delivering content. The Content Provider can use any type of content download mechanism, e.g. WEB, VOD, SMS or MMS. IPX provides the payment service, a possibility for Content Providers to charge the consumers. The Content provider's interface to IPX

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payment service is independent of the device type the consumer is using



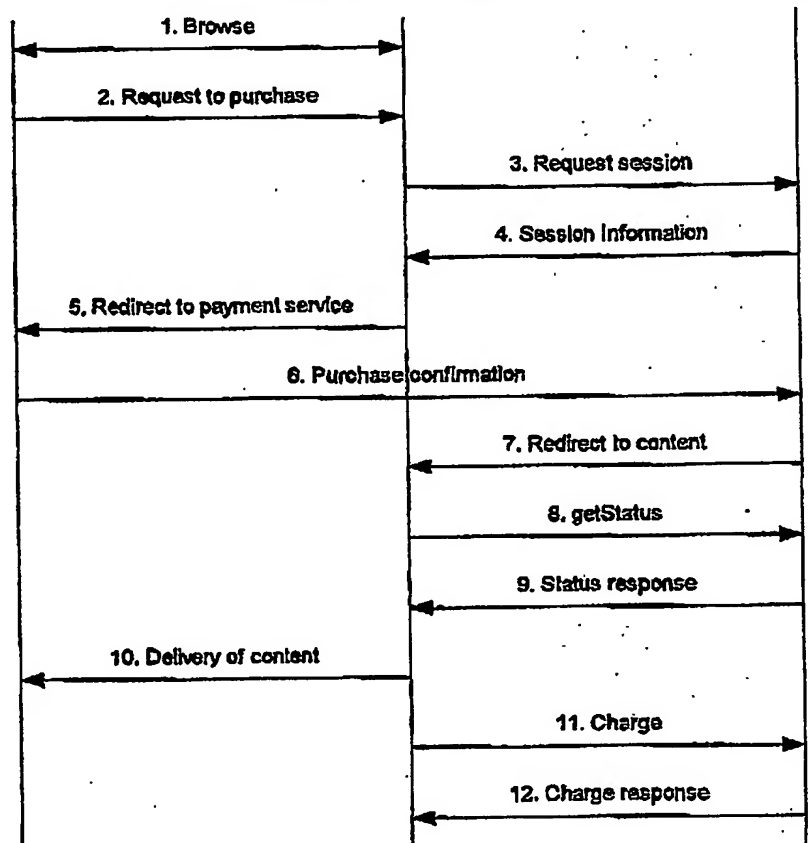
Consumer



Content Provider



IPX

**Phase 1 – Content Browsing**

1. The Content Provider offers Consumers to purchase content by paying via the mobile bill.
2. When a Consumer makes a request to purchase content, the Content Provider involves the IPX to perform and validate the purchase (if

Phase 2 – Identification/Authorization

3. The Content Provider makes a session request to the IPX system
4. The Content Provider receives a session id and a URL for redirect the Consumer to IPX.

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NR. 397 S. 10

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2003-03-27

Huvudfaxen Kassar

5. The Content Provider redirects the Consumer to the IPX payment service. IPX presents a purchase dialogue to the consumer.
6. The Consumer confirms the purchase. The confirmation method differs between the payment and authentication methods.
7. When the purchase is approved, verified and registered by IPX the Consumer is forwarded back to the Content Provider.

Phase 3 – Content Delivery

8. The Content Provider requests for the status.
9. The status of the identification, authorization and conferment of the purchase is returned by IPX.
10. If the purchase was successful, the Content Provider delivers the content to the consumer.

Phase 4 – Payment

11. The Content Provider request to charge the consumer for the delivered content to IPX who registers the purchase.
12. The Content Provider receives the status.

6. Benefits for Ericsson

The solution is being applied in the IPX venture and used commercially in the market. It is of the utmost importance that the solution is protected to avoid infringements in the business execution.

7. Project etc.

This solution is applied in IPX Venture of Ericsson Business Innovation

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Huvudfaxen, Kungälv



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User Cases - IPX

- WEB purchase
- WAP purchase
- SMS - One way
 - Push
 - Pull
- SMS - Two way
 - Pull - Push
 - Push - Pull

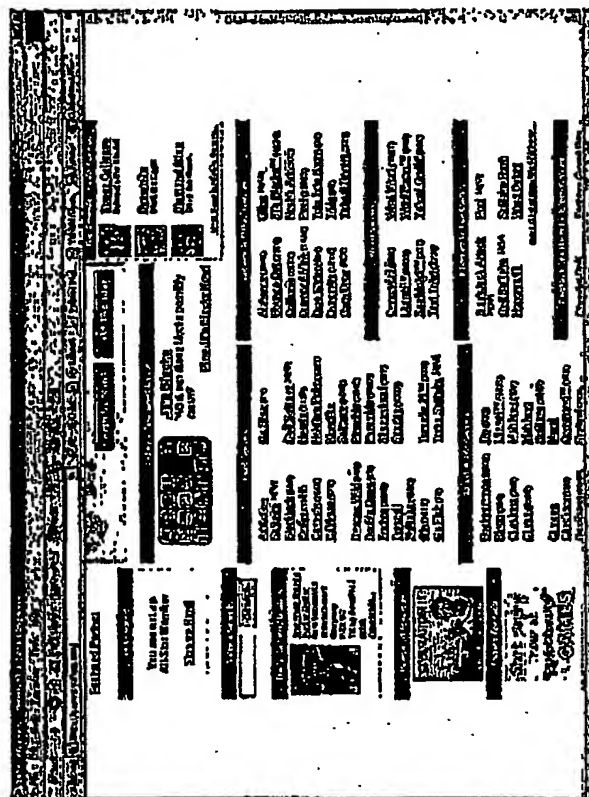
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Huvudfaxen Kassa

Fred does a WEB purchase using PSMS (Step 1)

Fred browses a gaming site
and chose to play MahJong by
clicking it.



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Fred does a WEB purchase using PSMS (Step 2)

The MahJong link directs Fred to the payment dialogue, generated by IPX. The payment dialogue contains information about price and necessary information needed to pay by premium SMS.

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Huvudfaxen Kaseon

Purchase - Microsoft Internet Explorer

Pay via your mobile bill. To purchase this service send a SMS to 71280 with the text MJ. You will be directed to the game when the purchase is completed.

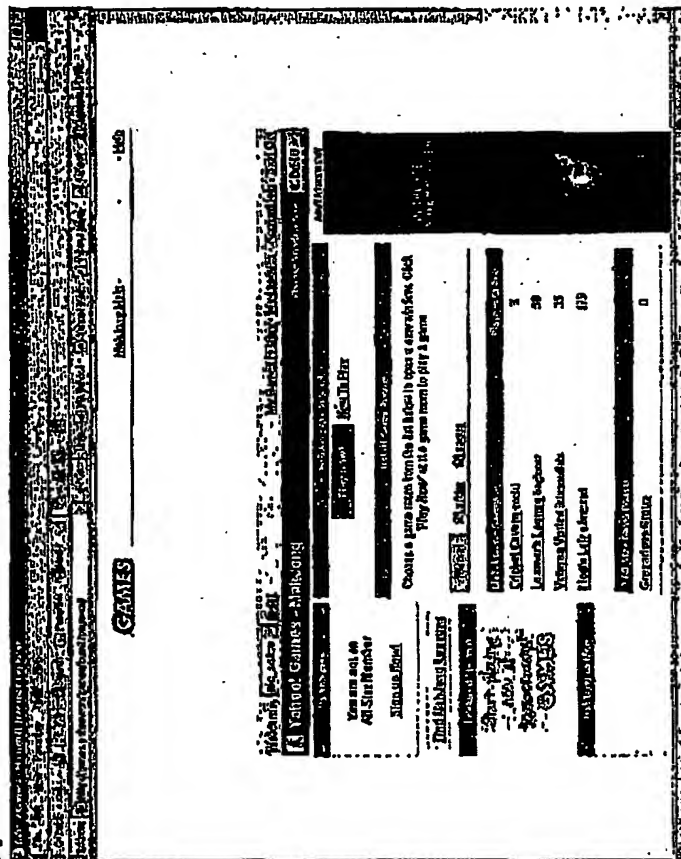
Game: MahJong
Price: 1 USD

only the premium link to purchase this service send a SMS to 71280 with the text MJ. You will be directed to the game when the purchase is completed.

Game: MahJong
Price: 1 USD

Back Forward Stop

When the SMS has arrived, Fred is re-directed to the content, in this case the MahJong site where he can play the game.



St. Patent- och reg. verket

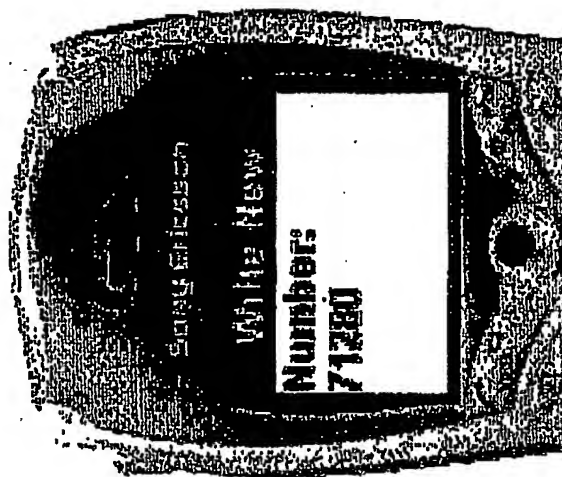
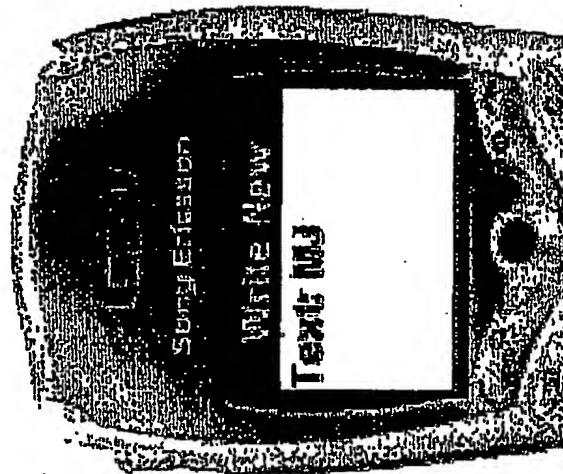
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Huvudfaxen Nassan



Fred does a WEB purchase using PSMS (Step 3 & 4)

Fred enters the text...



...and sends it to the
specified number

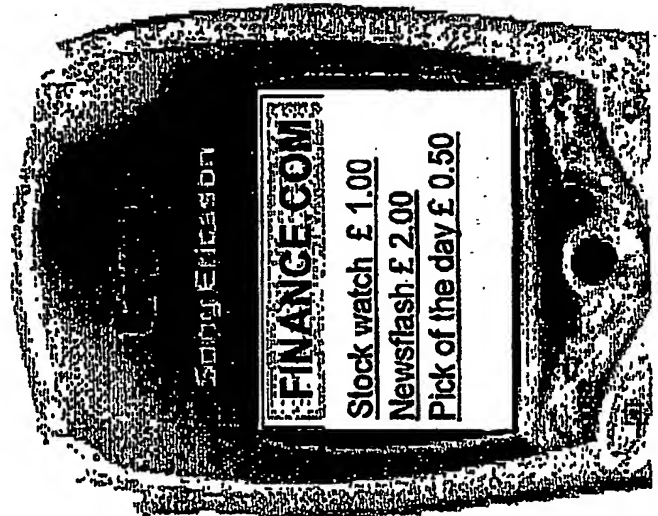
Patent: 031 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000



Fred does a WAP purchase (Step 1)

Fred browses to the sites he normally use for the information and content they seek. In this case a financial service at Finance.com.

Finance.com offers a selection of premium services to their consumers, in this example, real time stock quotes, newsflash or pick of the day



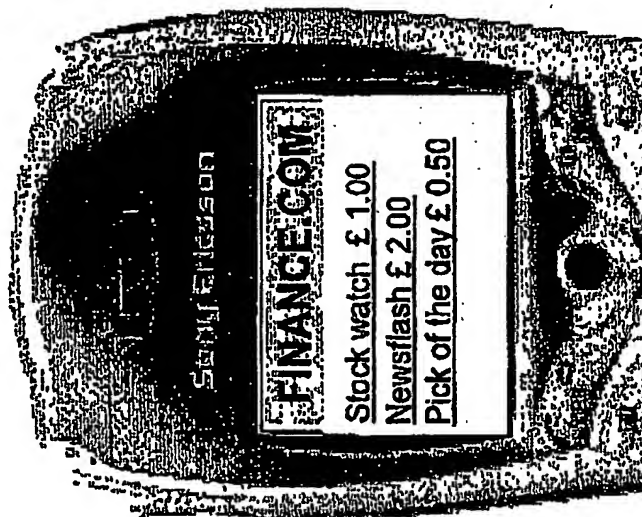
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Huyden & Kassen

Fred does a WAP purchase (Step 2)

Fred selects the stock watch service, priced at £1. The purchase request will now be routed to IPX for validation with corresponding Operator.



Ink. t. Patent- och reklam

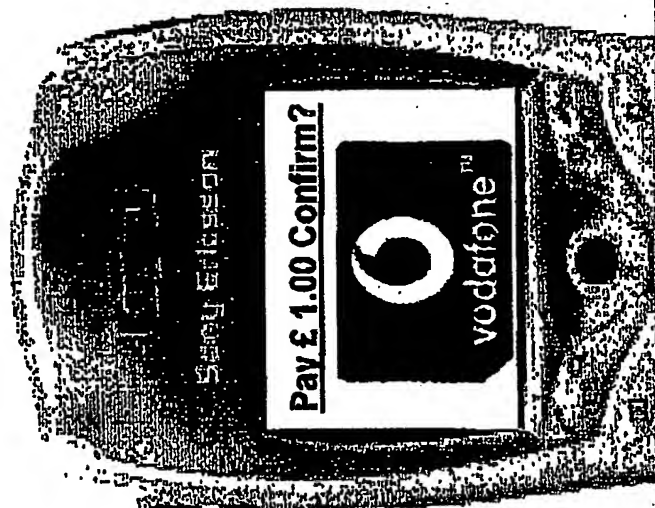
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Fred does a WAP purchase (Step 3)

Since Fred is a customer of Vodafone and was approved by Vodafone to make the purchase. Fred is prompted with his Operators logo for purchase confirmation. The purchase is confirmed once Fred actively confirms by selecting and clicking confirm Purchase



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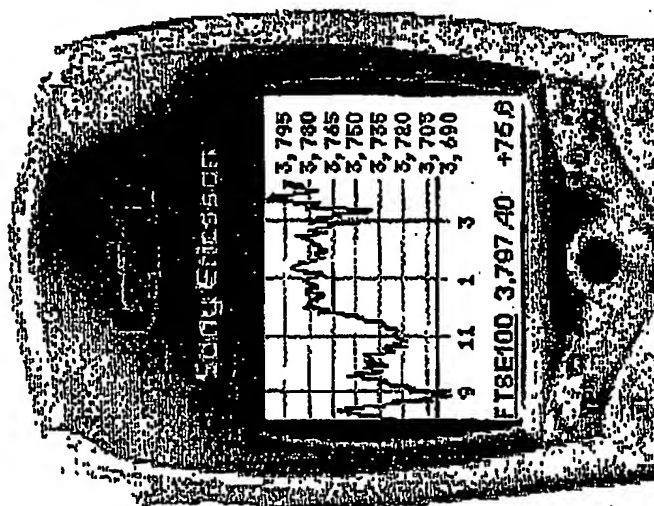
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Fred does a WAP purchase (Step 4)

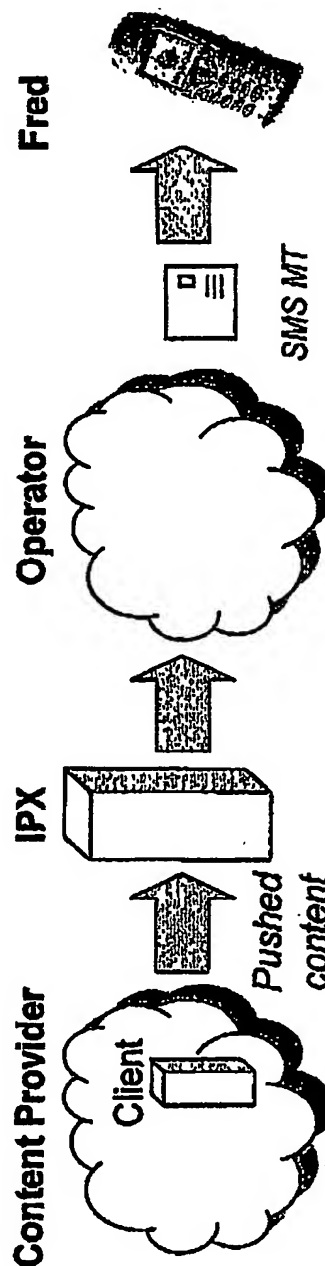
Fred will directly after his confirmation get access to the purchased information in this example the real time stock quotes from London Stock Exchange provided by Finance.com





SMS push

The client application at the Content Provider is connected to IPX through a specified interface. The Content Provider pushes the content through this channel; IPX is then connected to all Operators' SMSC interfaces for distribution of the content to the correct Consumer in this case Fred.



Applications suitable: Information Services, Real-time notifications and alerts, Direct Marketing offerings etc.

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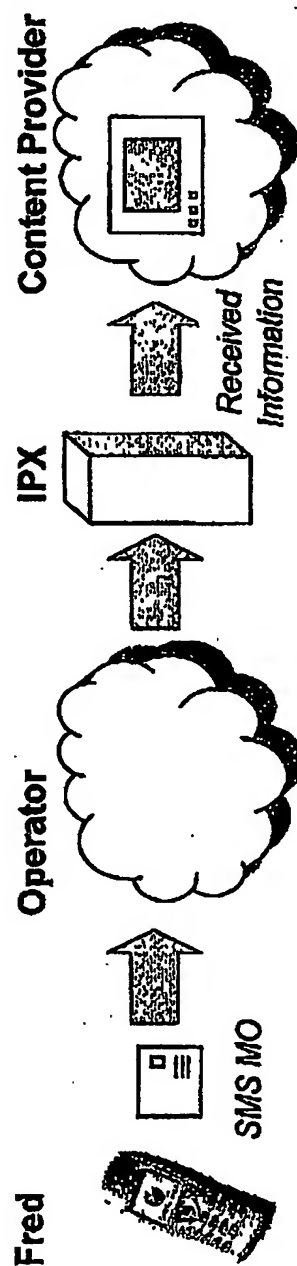
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Huvudstaden Kassa



SMS pull

The mobile users can request information (pull) by sending an SMS from their mobile phones to a service number linked to the service of the content provider. The dedicated service number (5 digit short code) is reachable from all Operators' users.



Applications suitable: Dedicated requests, Voting, Quiz applications etc.

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Ink. t. Patent och Reg.verket

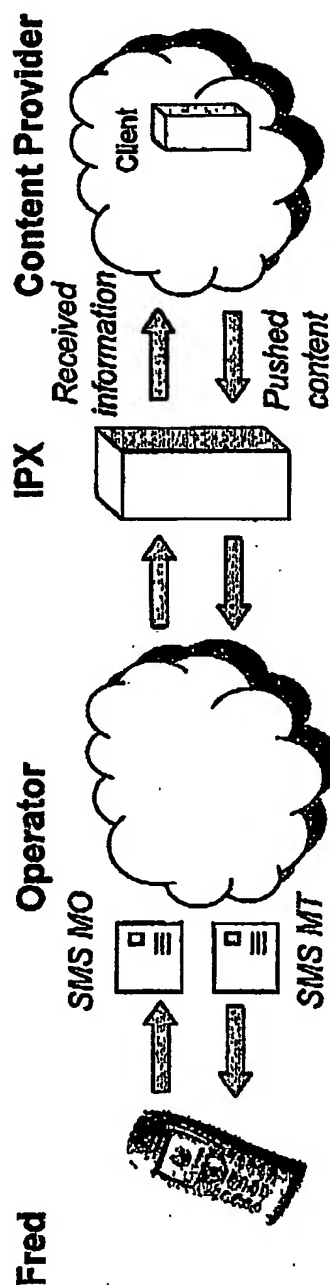
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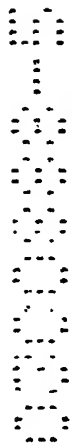


SMS pull - push

Fred, pulling information from the Content Provider, can initiate the two-way service.



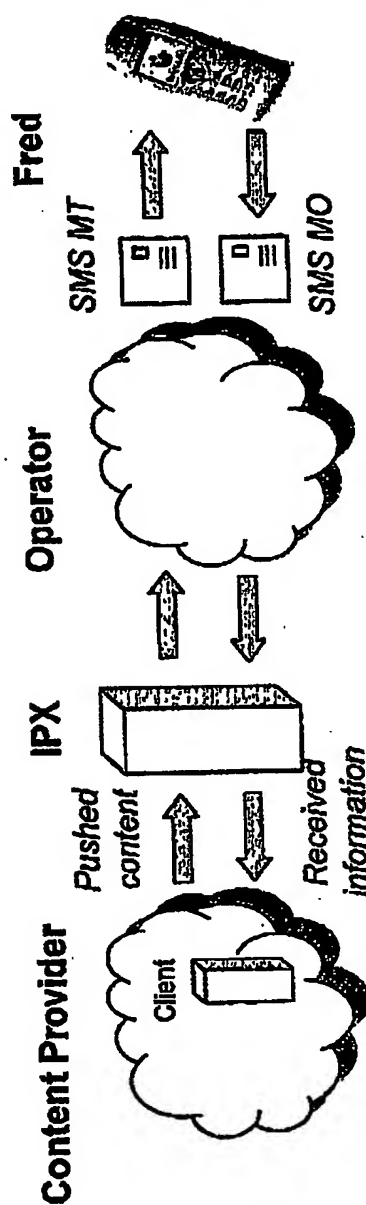
Applications: Stock quotes, Horoscopes, Sport results, Games etc.



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SMS push - pull

The service can also be initiated by the Content Provider's application.



Applications: Instant messaging, e-mail, Chat services etc.

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